TABLE 1 - 12/28/11 FIELD AND QC SAMPLING SUMMARY DIMOCK RESIDENTIAL GROUNDWATER SITE DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA

Fort Meade Lab

Parameter/Method	Matrix	Field	Bkgd		QC	Sample Summ	ary		Total Field and QA/QC Analyses {not
i di	, matrix	Samples	J. Kgu	Dup	Trip ¹ Blanks	Rinsate ¹¹² Blanks	Field¹ Blanks	MS/MSD	including MS/MSD) ³
Alkalinity (SM 2320B) (Total Hardness, HCO3, CO3) (2320B, 2340B)	drinking water	60	0	6	0	0	5	0	71
Alcohols: Ethanol, methanol, 1-propanol, 1-butanol, 2-butanol (8015D)	drinking water	60	0	6	0	0	5	3	71
Anions, Chloride, Bromide, Fluoride, Nitrate/Nitrite as N, Orthophosphorus as P, Sulfate as SO4 (300.0)	drinking water	60	0	6	0	0	5	0	71
Glycols incl. 2-Butoxyethanol (8321 Modified)	drinking water	60	0	6	0	0	5	0	71
Ethylene Glycol (8015M)	drinking water	60	0	6	0	0	5	0	71
2-Methoxyethanol (8015B)	drinking water	60	0	6	0	0	5	0	71
Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)	drinking water	60	0	6	0	0	5	6	71
Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)	Filtered drinking	60	0	6	0	0	5	6	71
pH (9040C)	drinking water	60	0	6	0	0	5	0	71
Phosphorus, Total (365.1)	drinking water	60	0	6	0	0	5	0	71
Nitrate/Nitrite (353.2)	drinking water	60	0	6	0	0	5	0	71
Semi-Volatiles (TCL plus TICs) (CLP Trace plus TICS) (OLC03.2)	drinking water	60	0	6	0	0	5	3	71
1-methylnapthalene (8270 or equivalent)	drinking water	60	0	6	0	0	5	0	71
Volatiles Incl. Acrylonitrile (TCL plus TICs) (CLP Trace - 0.5 ug/L QL) (OLC03.2)	drinking water	60	0	6	1 per cooler	0	5	3	71 + Trip Blanks for Coolers
Oil & Grease (HEM) (1664A)	drinking	60	0	6	0	0	5	0	71
Solids, Total Dissolved (TDS) (2540C)	drinking	60	0	6	0	0	5	0	71
Solids, Total Suspended (TSS) (2540D)	drinking	60	0	6	0	0	5	0	71

Notes:

1. This QA sample will be a nayueous matrix.

2. Sample to be collected only if non-dedicated sampling equipment is used.

3. Estimate based on 5 sampling days

Key:

Bkgd = Background
M5/M5D = Matrix Spike/Matrix Spike Duplicate
CRQL = Contract-Required Quantitation limit.

Dup = Duplicate

QA/QC = Quality assurance/quality control Sr = Strontium

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Contract No. EP-S3-10-14

TABLE 1 - 12/28/11 FIELD AND QC SAMPLING SUMMARY

DIMOCK RESIDENTIAL GROUNDWATER SITE DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA

EPA Region 9 Lab

El A Region 5 Eds											
		Field	Field Bkgd Bkgd		QC	Total Field and					
Parameter/Method	Matrix			Dup	Trip ¹ Blanks	Rinsate ¹¹²	Field ¹	MS/MSD	QA/QC Analyses (not		
·		Samples				Blanks	Blanks		including MS/MSD)3		
Dissolved Gases, Methane, Ethane, & Ethene (RSK-175)	drinking	60		-		0	-		71		
Dissolved dases, Mechane, Echane, & Echene (KSK-173)	water	00 0	_ ·					/*			
DRO (8015M)	drinking	60	0	6	0	0	5	0	71		
GRO (8015M)	drinking	60	0	6	0	0	5	0	71		

This QA sample will be an aqueous matrix.

. Sample to be collected only if non-dedicated sampling equipment is used. Estimate based on 5 sampling days

Key: Bkgd = Background

MS/MSD = Matrix Spike/Matrix Spike Duplicate
CRQL = Contract-Required Quantitation limit.

Sr = Strontium

QA/QC = Quality assurance/quality control

Dup = Duplicate TABLE 1 - 12/28/11

FIELD AND QC SAMPLING SUMMARY

DIMOCK RESIDENTIAL GROUNDWATER SITE DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA

EPA Region 2 Lab

Parameter/Method		Field	Bkgd		Total Field and				
Parameter/ Wethod	Matrix	Samples	ьква	Dup	Trip ¹	Rinsate ¹¹²	Field ¹	MS/MSD	QA/QC Analyses (not
Methylene Blue Active Substances (MBAS) (SM 5540C)	drinking	60	0	6	0	0	5	0	71
Notes:	Key:								
This QA sample will be an aqueous matrix.	Bkgd = Background QA/QC = Quality assurance/quality co							ontrol	
Sample to be collected only if non-dedicated sampling equipment is used.	MS/MSD = Matrix Spike/Matrix Spike Duplicate Sr = Strontium								
3. Estimate based on 5 sampling days	CRQL = Contra	ct-Required 0	Quantitatio	on limit.					

Dup = Duplicate TABLE 1 - 12/28/11

FIELD AND QC SAMPLING SUMMARY

DIMOCK RESIDENTIAL GROUNDWATER SITE DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA

Isotech Lab

		Field Bk			QC	Total Field and			
Parameter/Method	Matrix		Bkgd	Dup	Trip ¹ Blanks	Rinsate ¹⁾² Blanks	Field¹ Blanks	MS/MSD	QA/QC Analyses (not including MS/MSD) ³
d ¹³ C and d ² H of methane (isotech)	drinking water	10	0	0	0	0	0	0	10
d ¹³ C of inorganic carbon (isotech)	drinking water	10	0	0	0	0	0	0	10
Stable isotopes of water (O,H) (isotech)	drinking water	10	0	0	0	0	0	0	10
Complete compositional analysis of headspace gas (isotech)	drinking	10	0	0	0	0	0	0	10
Diss. gases methane, ethane, ethene (isotech)	drinking	10	0	0	0	0	0	0	10

This QA sample will be an aqueous matrix.

Bkgd = Background

QA/QC = Quality assurance/quality control

Sample to be collected only if non-dedicated sampling equipment is used.

Estimate based on 5 sampling days

MS/MSD = Matrix Spike/Matrix Spike Duplicate CRQL = Contract-Required Quantitation limit.

Contract No. EP-S3-10-14

DIM0184308 DIM0184309

TABLE 1 - 12/28/11 FIELD AND QC SAMPLING SUMMARY DIMOCK RESIDENTIAL GROUNDWATER SITE DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA NAREL Lab Total Field and QC Sample Summary 1 Rinsate¹¹² F Field Samples Parameter/Method Bkgd QA/QC Analyses (no Trip¹ Dup MS/MSD Blanks Blanks including MS/MSD) Gamma Spec (K-40, Ra-226, Ra-228, Th-232, Th-234, U-234, U-235, U-238) (901.1) drinking drinking Ra-226 (903.1) 60 0 0 Ra-228 (904.0) 60 oss Alpha/Beta (900.0) drinking Ney: Bkgd = Background MS/MSD = Matrix Spike/Matrix Spike Duplicate CRQL = Contract-Required Quantitation limit. This QA sample will be an aqueous matrix. Sample to be collected only if non-dedicated sampling equipment is used. Estimate based on 5 sampling days QA/QC = Quality assurance/quality control Sr = Strontium TABLE 1 - 12/28/11 FIELD AND QC SAMPLING SUMMARY DIMOCK RESIDENTIAL GROUNDWATER SITE DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA TechLaw Pace Lab Total Field and QC Sample Summary Field¹ Parameter/Method Trip¹ QA/QC Analyses (n Dup Samples Blanks including MS/MSD) Bacteria (total coliform, HPC) 60 0 6 0 0 71 drinking Furbidity, Nephelometric (180.1) 60 0 6 0 0 5 0 71 water Key: Bkgd = Background QA/QC = Quality assurance/quality control MS/MSD = Matrix Spike/Matrix Spike Duplicate Sample to be collected only if non-dedicated sampling equipment is used. Estimate based on 5 sampling days Sr = Strontium CRQL = Contract-Required Quantitation limit. Dup = Duplicate

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	DIMOCK RI	YTICAL REQUIREMENT SIDENTIAL GROUNDW UEHANNA COUNTY, PE	ATER SITE			
Analytical parameter and Method	Matrix	Sample Preservation	Holding Time	Sample Container(s)	Procurement Sour	Number
Alcohols: Ethanol, methanol, 1-propanol, 1-butanol, 2- butanol (8015D)	drinking water	lce, 6°C	7 days	Three 40-ml glass vials (Fill to capacity with no head space)	Ft. Meade	3
Alkalinity (2320B, 2340B)	drinking water	lce, 6°C	14 days	One 500-ml HDPE	Ft. Meade	1
Anions: Chloride, Bromide, Fluoride, Nitrate/Nitrate as N, Orthophosphorus as P, Sulfate as SO4 (300.0)	drinking water	lce, 6°C	28 days	One 500-ml HDPE	Ft. Meade	1
Bacteria (total coliform, HPC)	drinking water	Ice, 4°C (.008% Na2S2O3 if residual CI- present)	6 hours	125 ml Pre-sterilized polyproylene	Tier 4	1
d13C and d2H of methane (Isotech)	drinking water	ice, 4°C, biocide pill in sample container	6 months	one 1-L poly/TBD*	Tier 4	1
d13C of inorganic carbon (Isotech)	drinking water	Ice, 4°C	6 months	one 1-L poly/TBD*	Tier 4	1
Complete compositional analysis of headspace gas (isotech)	drinking water	Ice, 4°C, biocide pill in sample container	6 months	one 1-L poly/TBD*	Tier 4	1
Diss. gases methane, ethane, ethene (isotech)	drinking water	Ice, 4°C, biocide pill in sample container	6 months	one 1-L poly/TBD*	Tier 4	1
Dissolved Gases, Methane, Ethane, & Ethene (RSK-175)	drinking water	pH<2 with HCl and cool with ice, 4°C	7 days	One 40-ml glass vial	Tier 4	1
Ethylene Glycol (8015M)	drinking water	ice, 4°C	7 days	Three 40-ml glass vials (Fill to capacity with no head space)	Tier 4	3
DRO (8105M)	drinking water	ice, 4°C	7 days extract; 40 days analysis	Two 1-Liter amber glass jars with teflon-lined lids		2
		pH<2 with HCl and cool		Three 40-ml glass vials (Fill to capacity with no head		_
GRO (8105M) Gamma Spec (K-40, Ra-226, Ra-228, Th-232, Th-234, U-235,	drinking water	with ice, 4°C pH<2 with HNO3 and cool	14 days	space)		3
U-238) (901.1)	drinking water	with ice, 4°C	6 months	One 1-Liter HDPE	Tier 4	1
Glycols ind. 2-Butoxyethanol (8316)	drinking water	Ice, 6°C	7 days	Three 40-ml glass vials (Fill to capacity with no head space)	Ft. Meade	3
orice small 2 sates years no restar	dimaing water	pH<2 with HNO3 and cool	saugs.	spacey	T C T T C C C C C C C C C C C C C C C C	
Gross Alpha/Beta (900.0) Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr,	drinking water	with ice, 4°C pH<2 with HNO3 and cool	6 months	One 1-Liter HDPE	Tier 4	1
Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1) Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr,	drinking water	with ice, 4°C pH<2 with HNO3 and cool	6 months	One 1-Liter HDPE	Ft. Meade	1
Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)	(filtered) drinking water	with ice, 4°C	6 months	One 1-Liter HDPE	Ft. Meade	1
Methylene Blue Active Substances (MBAS) (SM 5540C)	drinking water	Ice, 4°C pH<2, H2SO4, and cool	48 hours	One 500-ml HDPE	Tier 4	1
Nitrate/Nitrite (Total N) (353.2)	drinking water	with ice, 4°C pH<2, H2SO4, and cool	7 days	Two 1-Liter amber glass jars with teflon-lined lids	Ft. Meade	2
Oil & Grease (HEM) (1664A)	drinking water	with ice, 4°C	28 days	One 1-Liter amber glass jars with teflon-lined lids	Tier 4	1
pH (9040C)	drinking water	Ice, 6°C	As soon as possible	One 250-ml HDPE	Ft. Meade	1
Phosphorus, Total (365.1)	drinking water	Ice, 6°C pH<2 with HNO3 and cool	28 days	One 400-ml HDPE	Ft. Meade	1
Ra-226 (903.1)	drinking water	with ice, 4°C pH<2 with HNO3 and cool	6 months	One 1-Liter HDPE	Tier 4	1
Ra-228 (904.0)	drinking water	with ice, 4°C	6 months	One 1-Liter HDPE	Tier 4	1
Semi-Volatiles (TCL plus TICs) (OLC03.2)	drinking water	ice, 6°C	7 days	Two 1-Liter amber glass jars with teflon-lined lids	Ft. Meade	2
Solids, Total Dissolved (TDS) (SM 2540C)	drinking water	lce, 6°C	7 days	One 500-ml HDPE	Ft. Meade	1
Solids, Total Suspended (TSS) (SM 2540D)	drinking water	Ice, 6°C	7 days	One 500-ml HDPE	Ft. Meade	1
Stable isotopes of water (O,H) (Isotech)	drinking water	lce, 4°C	6 months	one 1-L poly/TBD*	Tier 4	1
Turbidity, Nephelometric (180.1)	drinking water	lce, 4°C	48 hours	One 250-ml HDPE	Tier 4	1
2-Methoxyethanol (8015B)	drinking water	lce, 6°C	7 days	Two 1-Liter amber glass jars with teflon-lined lids	Tier 4	2
1-methylnapthalene (8270 or equivalent)	drinking water	lce, 6°C	7 days	Two 1-Liter amber glass jars with teflon-lined lids	Tier 4	2
Volatiles (TCL plus TICs) (CLP Trace - 0.5 ug/L QL) (OLC03.2) ind. Acrylonitrile	drinking water	2 drops of 1:1 HCl, pH<2, Ice, 6°C	7 days	Six 40-ml glass vials w/Teflon lined cap (no head space)	Pt. Meade	6
Note: Analyses will be combined into sample b KEY: *C = degrees Celsius C14 = Carbon 14 isotope CLP = Contract Lab Program D13C = delta of carbon-13 D2H = delta of deuterium H2SO4 = Sulfuric Acid HDPE = High density polyethylene	ml = milliliter Na2S203 = Sodium Th pH = potential Hydrog QL = Quantitation Lim Sr = Strontium TCL = Target Compour TICs = Tentatively Iden	iosulfate en it id List tified Compounds	ermination by lab(s).			50
HNO3 = Nitric Acid HPC = Heterotrophic Plate Count	ug/L = micrograms per * all parameters to be		be combined into one	: 1-L poly bottle with septum lid		

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